

REMARKS

The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 1-21, 23, 25-86, 93-95, 100-102 are pending in this case. Claims 100-102 have been rejected under 35 U.S.C. § 102(e). Claims 1-21, 23, 25-86, 93-95 have been allowed. Independent claims 93 and 100 have been amended.

Telephonic Interview

Applicant wishes to thank the Examiner for granting a personal interview on January 16, 2009. The interview participants included Examiner Kevin D. Mew and Howard Zaretsky (Applicant's representative).

Request for Consideration of Supplemental Information Disclosure Statement Filed March 21, 2003

A Supplemental Information Disclosure Statement (S-IDS) was filed by Applicant on March 21, 2003 listing four United States Patents for consideration by the Examiner. This S-IDS may have been lost since to date, the Applicant has not received a PTO-1449 form initialed by the Examiner that is usually sent with an Office Action. Applicant therefore requests entry and consideration of the S-IDS filed March 21, 2003. A copy of the S-IDS as filed including a return postcard with a date stamp of March 26, 2003 by the Office of Initial Patent Examination (OIPE) is submitted with this Response as Exhibit A.

Response to 35 U.S.C. § 102(e) Rejections

The Examiner rejected claims 100-102 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,078,591 ("Kalkunte et al."). Applicant respectfully submits that the prior art fails to disclose or suggest at least a method of accessing a network channel by a station comprising the steps of providing an FCD signal generated by a receive circuit, dividing contention for channel access into multiple windows, each window corresponding to a priority level, where each window is divided into FCD time slots, and contending for access to the channel during a whose priority is less than or equal to that of a packet awaiting transmission. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

Applicant has reviewed the cited art and respectfully submits that the art fails to disclose or suggest the Applicant's claimed invention, and fails to teach each and every element and limitation of the claims rejected herein. Therefore Applicant respectfully traverses the rejections and requests favorable reconsideration.

While continuing to traverse the Examiner's rejections, Applicant, in order to expedite the prosecution, has chosen to clarify and emphasize the crucial distinctions between the present invention and the devices of the patents cited by the Examiner. Specifically, claim 100 has been amended to include a method of accessing a network channel by a station, said method comprising the steps of providing a fast carrier detect (FCD) signal generated by a receive circuit, the FCD signal having a high false alarm rate to predict the start of packet transmissions from other stations on the channel, dividing contention for channel access into a plurality of N windows, each window corresponding to one of N priority levels, wherein N is a positive integer greater than zero, and wherein each window is further divided into a plurality of time slots, each time slot having a width of an FCD signal, and contending for access to the channel only during a window whose priority is less than or equal to that of a packet awaiting transmission.

Kalkunte et al. teaches a mechanism for obtaining better channel access for high priority transmissions mainly by reducing access latency. The mechanism is operative to modify collision delay intervals in a network node in order to overcome a detected capture effect in a half-duplex network. A network interface having a media access control (MAC) selectively modifies the collision delay interval based on detected capture effect. In one implementation, a node that has been locked out resets its attempt counter to become more aggressive in contending for the media. In applications requiring a guaranteed access, the attempt counter is reset and the collision delay interval is forced to zero slot times to attempt immediate access of the media following a collision. If the network includes multiple applications requiring guaranteed access, a node having encountered collisions switches from normal operation under the truncated binary exponential backoff (TBEB) algorithm to a shifted TBEB operation. If the node has captured the media, the node increases its attempt counter by a prescribed value to provide a less aggressive contention during collision mediation.

It is submitted that the method taught by Kalkunte et al. is substantially different from that of the present invention. Kalkunte et al. at col. 6, lines 5-65 teaches randomly selecting a slot time interval based on the number of access attempts. In particular, the mechanism

“determines the slot time interval based on an integer randomly selected from a range of integers, where the range of integers is calculated from an exponential number of access attempts.” See col. 6, lines 44-48.

Transmission is allowed after the calculated number of slot times and only if no receive carrier is sensed. The mechanism maintains an attempt counter to track the number of transmission attempts.

In contrast, the mechanism of the present invention teaches an access method that divides contention for channel access into a **plurality of windows**, wherein each window corresponds to

a **particular priority level**. Stations **wait** to contend for the channel until the contention window arrives whose priority is equal to or less than the priority of the particular packet awaiting transmission, and only then attempts to reserve the channel. These features are neither taught nor suggested by the Kalkunte et al. reference.

The method of Kalkunte et al. provides for the handling of priority data. Data can be either priority or not priority, without any mention of multiple priority levels. If data is not priority, then the MAC performs conventional collision mediation using the truncated binary exponential backoff (TBEB) algorithm. If the data is priority data, the MAC determines a collision delay interval as a function of the number of collisions previously encountered. If the number of collision previously encountered is less than a predetermined value, the collision delay interval is randomly set to zero or one time slot. See col. 9, line 57 to col. 10, line 9.

It is submitted that the priority contention mechanism of the present invention is substantially **different** from the Kalkunte et al. mechanism of randomly selecting a time slot based on the number of collisions previously encountered. The priority contention mechanism of the present invention handles priority by having a transmission **wait** for a contention period whose priority is equal to or less than the **assigned** priority of the packet awaiting transmission. A random backoff is calculated **only** if the channel is not idle when the corresponding priority contention arrives. In that case, a backoff time is initialized to a random number which is counted down within the corresponding priority contention window. After the counter reaches zero, the station attempts to reserve (or acquire) the channel.

It is believed that amended independent claims 20, 31, 60, 80, 83, 93 and new independent claim 100 overcome the Examiner's § 102(a) rejection based on the Kalkunte et al. reference as each of the independent claims recite the limitation of establishing priority contention windows which is not taught or suggested by Kalkunte et al. In addition, it is

believed that dependent claims 21-24, 29-30, 35-37, 40-41, 47-48, 61-64, 68-71, 79, 82, 85, 93 also overcome the Examiner's rejection based on § 102(a) grounds. The Examiner is respectfully requested to withdraw the rejection based on § 102(a).

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that independent claims 1, 20, 31, 60, 80, 83, 93-95, 100 and hence dependent claims 2-19, 21, 23, 25-30, 32-59, 61-79, 81-82, 84-86, 101-102 are now in condition for allowance. Prompt notice of allowance is respectfully solicited.

In light of the Amendments and the arguments set forth above, Applicant earnestly believes that they are entitled to a letters patent, and respectively solicit the Examiner to expedite prosecution of this patent applications to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

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Respectfully submitted,

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EXHIBIT A

Title: Channel Access Method for Powerline Carrier Based
Media Access Control Protocol

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Enclosed: 1. Supplemental Information Disclosure Statement
2. Postcard

Mailed: March 21, 2003

